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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,603	03/02/2004	Shang-Neng Wu	3426W	9144

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SPENCER, FANE, BRITT & BROWNE
1000 WALNUT STREET
SUITE 1400
KANSAS CITY, MO 64106-2140

EXAMINER	
SANTOS, ROBERT G	

ART UNIT	PAPER NUMBER
3673	

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/790,603	WU, SHANG-NENG	
	Examiner	Art Unit	
	Robert G. Santos	3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-37* is/are pending in the application.

4a) Of the above claim(s) *37* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claim 37 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claim 37 recites only the subcombination of an air valve, whereas claims 7-36 recite the combination of an air mattress with an inflation and deflation system.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 37 has been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03. (Furthermore, it appears that claim 37 contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the claimed invention; i.e., the limitations of a blower "being placed in a first lateral cover and a second lateral cover" and an inner side of the rotary element being "extended with a driving shaft".)

Claim Objections

2. Claims 30 and 36 are objected to because of the following informalities: In the first line of claims 30 and 36, the term "multi-" should be changed to the term --three--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 21, 22, 25-28, 30-34 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 4,197,837 to Tringali et al. With regards to claims 21 and 22, Tringali et al. '837 show the claimed limitations of a method for inflating and deflating a patient support air mattress (11), the method comprising providing a blower (17) producing air flow in pneumatic communication with the internal chamber (23 or 24) of an air mattress, the blower including an inlet and an outlet; inflating the mattress by directing the flow of air to the mattress through a single inflation port (34) of a valve (16) in an inflation direction from the blower outlet; and deflating the mattress by directing the flow of air from the mattress through a single deflation port (35) of a valve in a deflation direction to the blower inlet, wherein directing the flow of air in a deflation direction comprises redirecting the flow of air with a multi-position valve (as shown in Figures 4-8 and as described in column 4, lines 35-52 and in column 5, lines 15-36).

With regards to claims 25-28 and 31-34, the reference discloses the use of a inflatable patient support apparatus comprising an inflatable mattress (11) including an internal chamber (23 or 24), a single direction blower (17) operable to provide air flow into and out of the internal chamber, and a three port (any grouping of three ports selected from elements 34-39), two-

position rotary valve controlling the air flow to inflate or deflate the mattress with the blower. As concerns claims 30 and 36, the reference is also considered to show a condition wherein the three port valve is manually operated in Figures 6-8 and in column 4, lines 35-40.

5. Claims 21-28 and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,373,595 to Johnson et al. With regards to claims 21-24, Johnson et al. '595 show the claimed limitations of a method for inflating and deflating a patient support air mattress (110), the method comprising providing a blower (26) producing air flow in pneumatic communication with the internal chamber (109) of an air mattress, the blower including an inlet and an outlet; inflating the mattress by directing the flow of air to the mattress through a single inflation port (62) of a valve (30) in an inflation direction from the blower outlet; and deflating the mattress by directing the flow of air from the mattress through a single deflation port (69) of a valve in a deflation direction to the blower inlet, wherein directing the flow of air in a deflation direction comprises redirecting the flow of air with a multi-position valve, wherein redirecting the flow of air with a multi-position valve comprises removing the blower outlet from pneumatic communication with the air mattress internal chamber and placing the blower inlet in pneumatic communication with the air mattress internal chamber for rapid deflation (as described in column 14,lines 61-68 and in column 15, lines 1-4) and wherein directing the flow of air in an inflation direction comprises placing the blower outlet in pneumatic communication with the air mattress internal chamber (as described in column 14, lines 39-45).

With regards to claims 25-28 and 31-34, the reference discloses the use of a inflatable patient support apparatus comprising an inflatable mattress (100) including an internal chamber

(109), a single direction blower (26) operable to provide air flow into and out of the internal chamber, and a three port (any grouping of three ports selected from elements 45a-g), two-position rotary valve controlling the air flow to inflate or deflate the mattress with the blower.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 7-20, 29 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. '595 in view of U.S. Pat. No. 4,949,414 to Thomas et al. Johnson et al. are considered to disclose all of the limitations as recited in claims 7-20, 29 and 35 (see also Figure 1; column 10, lines 38-44; and column 15, lines 30-42) except for the use of pressure sensors interposed between electrically controlled valves in the air supply lines (54-59) and the chambers (109) of the air mattress (110); wherein the control unit (29) receives pressure signals from the pressure sensors and transmits a signal to incrementally close the valve in the air supply line having an air pressure above the predetermined range of pressures or transmits a signal to incrementally open the valve in the air supply line having an air pressure below the predetermined range of pressures; and wherein the control unit is able to transmit a signal to incrementally increase the supply of electrical power to the blower motor to increase the blower output if pressure in an air supply line is below a selected range of pressures and the valve in that line is completely open. Thomas et al. '414 provide the basic teaching of an air flow control

system comprising an electrically controlled valve (162) in at least one air supply line; a pressure sensor (186) interposed between the electrically controlled valve and at least one chamber (34) of an air mattress; wherein the control unit (29) receives signals from the pressure sensor and transmits a signal to incrementally close the valve in the air supply line having an air pressure above the predetermined range of pressures or transmits a signal to incrementally open the valve in the air supply line having an air pressure below the predetermined range of pressures (as described in column 22, lines 46-68 and in column 23, lines 1-2); and wherein the control unit is able to transmit a signal to incrementally increase the supply of electrical power to the blower motor to increase the blower output if pressure in an air supply line is below a selected range of pressures and the valve in that line is completely open (as described in column 14, lines 64-68 and in column 15, lines 1-4). The skilled artisan would have found it obvious at the time the invention was made to provide the system of Johnson et al. '595 with the use of pressure sensors interposed between electrically controlled valves in the air supply lines and the chambers of the air mattress; wherein the control unit receives pressure signals from the pressure sensors and transmits a signal to incrementally close the valve in the air supply line having an air pressure above the predetermined range of pressures or transmits a signal to incrementally open the valve in the air supply line having an air pressure below the predetermined range of pressures; and wherein the control unit is able to transmit a signal to incrementally increase the supply of electrical power to the blower motor to increase the blower output if pressure in an air supply line is below a selected range of pressures and the valve in that line is completely open in order to ensure more readily proper support for a user positioned on the air mattress.

Response to Amendment

In response to Applicant's arguments on pages 9 and 12 of his amendment stating that the Johnson et al. '595 and Tringali et al. '837 references do not disclose the use of a valve having a three port structure, the examiner respectfully disagrees and asserts that any grouping of three ports of the respective valve structures disclosed by Johnson et al. '595 and Tringali et al. '837 would meet this claimed limitation. Claims in a pending application should be given their broadest reasonable interpretation. *In re Pearson*, 181 USPQ 641 (CCPA 1974). Furthermore, in response to Applicant's arguments on pages 10 and 11 of his amendment regarding the blower structure as claimed, the examiner respectfully asserts that a limitation wherein the air pump or compressor is capable of blowing air in two directions simply is not recited in the claims (please also note claims 28 and 34) and that only inflation and deflation directions respectively from the blower outlet and to the blower inlet are specifically claimed.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert G. Santos whose telephone number is (571) 272-7048. The examiner can normally be reached on Tues-Fr and first Mondays, 10:30 a.m. to 8:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on (571) 272-7049. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert G. Santos
Primary Examiner
Art Unit 3673

R.S.
August 8, 2005